

11607

ABSTRACT

A fluid-carrying swivel joint has a stepped bearing race arrangement on interconnecting hubs having an improved bore seal capability. The stepped arrangement allows more ball bearings per adjacent race which allows equal distribution of hydrostatic end loading to each bearing race, thereby enabling maximum total end loading while minimizing load concentration on a particular bearing race section due to increased total ball and race contact area. A straight bore type seal is used to reduce surface area subject to axial pressure and to minimize rotational friction.